## **EUROPEAN PATENT OFFICE**

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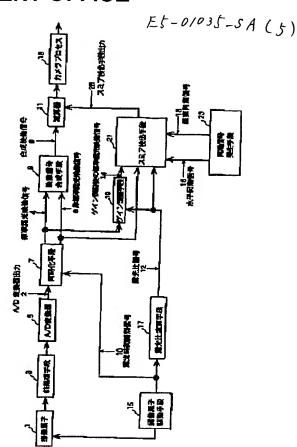
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TITLE : VIDEO SIGNAL PROCESSING UNIT,

VIDEO SIGNAL PROCESSING

METHOD, IMAGE PROCESSING UNIT, IMAGE PROCESSING METHOD AND

**IMAGE PICKUP DEVICE** 



ABSTRACT :

PROBLEM TO BE SOLVED: To obtain a video signal with excellent S/N resulting from enhancing the effect of smear and a wide dynamic range in a video signal processing unit that synthesizes video signals with different exposure ratios in a same scene.

SOLUTION: A smear detection means 21 uses a standard exposure video signal 4 after gain adjustment, a nonstandard exposure video signal 6, and an exposure ratio signal 12 to detect a mean value of smear of one image pattern in a vertical direction. The detected smear mean value is given to a subtractor 11 as a smear detection means output 28. The subtractor 11 subtracts the smear detection means output 28 from a synthesized video signal 8. An output of the subtractor 11 is a video signal with a wide dynamic and an excellent S/N that is less affected by a smear component. Or the processing unit may be configured such that the smear detection means output 28 may be subtracted at an input side of a video signal synthesis means 9.

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